# FPL NEWS

## Recent developments from the Forest Products Laboratory



# Agriculture Secretary Schafer Awards More Than \$4.1 Million for Use In Woody Biomass Development

Agriculture Secretary Ed Schafer announced the award of \$4.1 million to help 17 small businesses and community groups find more innovative uses of woody biomass from national forests in new products and renewable energy. The grants will help create markets for small-diameter woody material, damaged and other low-valued trees removed to reduce the risk of fire hazard, insect infestation or disease. For the full story and a complete list of grant recipients, visit

http://www.usda.gov/wps/portal/!ut/p/\_s.7\_0\_A/7\_0\_1OB?contentidonly=true&contentid=2008/03/0076.xml

#### **Chemist Receives Fulbright Senior Research Award**

Dr. Kenneth E. Hammel, research chemist at the Forest Products Laboratory, has been named recipient of a Fulbright Senior Research Award by the German-American Fulbright Program. Hammel will be studying mechanisms of lignin-degrading fungi, focusing on newly discovered enzymes that have an important role in carbon cycling in forest soils. These enzymes also have potential applications in biotechnology for selective oxidations of chemicals. Professor Martin Hofrichter at the International Graduate School in Zittau, Germany, is hosting Hammel, whose 10 months of research abroad begin October 1, 2008. To see a press release on this accomplishment, visit <a href="http://www.fpl.fs.fed.us/pressroom/newsreleases/nr-2008mar25-hammel-fulbright.html">http://www.fpl.fs.fed.us/pressroom/newsreleases/nr-2008mar25-hammel-fulbright.html</a>

### **Biofuels Project Utilizes Forest Residue Feedstock**

Flambeau River Biofuels, LLC, will build a modern, integrated, profitable, biofuels project using "forest residue" feedstock. The Forest Products Laboratory is conducting an engineering feasibility study of this project, which will be a model of low-cost, environmentally friendly biofuel production. For more on Flambeau River Biofuels, visit (ADD LINK TO ONE-PAGER HERE)

#### Patent Issued to FPL Researcher for Adhesives Work

A U.S. Patent was issued for "Water-Resistant Vegetable Protein Adhesive Dispersion Compositions" invented by FPL chemist Charles R. Frihart and James M. Wescott. The patent provides water-resistant, protein-based adhesive dispersion compositions and methods for preparing them. The adhesive dispersions exhibit superior water resistance, and can be used to bond wood substrates, such as panels or laminate, or in the preparation of composite materials.

#### Smallwood 2008 and Bioenergy & Wood Products Joint Conference: Cutting Edge Technologies to Optimize Utilization of Smallwood and Woody Biomass

May 13–15, 2008 at the Monona Terrace Convention Center, Madison, Wisconsin, USA. This conference provides state of the art information on small-tree utilization and foster peer-to-peer learning. An international slate of speakers including researchers, material and equipment suppliers, manufacturers, and end-users will attend. http://www.forestprod.org/confsmallwood08.html.

The Department of the Interior in cooperation with the National Association of Conservation Districts is making a limited amount of financial support available to assist with registration, travel, and lodging for the conference. The primary intended recipients are local officials from conservation districts, RC&Ds, and counties. For more information and scholarship application forms, please visit

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- Moisture control in insulated raised floor structures

http://www.forestprod.org/smallwood08scholarships.html.

# Field Evaluation Manual Developed for Wood Preservation in Highway Applications

In cooperation with the Bridge Engineering Center at Iowa State University, FPL research scientists in Durability and Wood Protection have developed a field manual entitled "Field Evaluation of Timber Preservation Treatments for Highway Applications" for the State of Iowa. The manual addresses the field effectiveness of various treatment alternatives used on Iowa roadway projects. One of the aims of the research was to determine if current specifications and test metrics are adequate for providing proper wood protection to over 2900 bridges in Iowa that are wholly or partially constructed of wood. Authors are Jake J. Bigelow, Carol A. Clausen, Stan T. Lebow, and Lowell Greimann. The research was funded through a grant from the Iowa Highway Research Board and Iowa Department of Transportation.

#### **Study Examines Wood's Ability to Remove Metal Ions From Water**

An article published in the February 2008 issue of Bioresources, an on-line journal of North Carolina State University, describes research by several FPL scientists that examines a method to selectively modify one of the major chemical groups contained in the polysaccharide portion of wood. The study demonstrates that the wood's ability to remove metal ions from water can be improved with this method, increasing the value of this low-cost material for use in the clean-up of water resources contaminated with heavy metals. Follow this link for the full article:

http://ncsu.edu/bioresources/BioRes 03/BioRes 03 1 0204 McSweeny RCEM Periodate Pine Copper.pdf

### **Study Looks at Moisture Control in Insulated Raised Floor Structures**

Under-floor insulation in raised floor structures can lead to moisture problems. To address this issue, Forest Products Laboratory scientists Samuel Glass and Charlie Carll, in collaboration with Louisiana State University Agricultural Center (LSU AgCenter), have installed monitoring systems and various types of insulation in 12 homes in Southern Louisiana, eight of which are in Musicians' Village, a New Orleans Habitat for Humanity project. Insulation systems to be tested over a 12-month period include rigid foil-faced polyisocyanurate foam, open-cell sprayed polyurethane foams of varying vapor permeance, closed-cell sprayed polyurethane foam, and kraft-faced fiberglass batt insulation. Best Practices developed from results of this research will improve the durability and moisture tolerance of wood-frame housing in the hot, humid climate of the Gulf Coast region. The research is being conducted through the Coalition for Advanced Wood Structures (CAWS), in partnership with APA-The Engineered Wood Association and Southern Forest Products Association (SFPA). For more information, visit <a href="http://www.fpl.fs.fed.us/documnts/rips/fplrip-4716-005-lsu-moisture-raised%20floors-durability.pdf">http://www.fpl.fs.fed.us/documnts/rips/fplrip-4716-005-lsu-moisture-raised%20floors-durability.pdf</a>





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